

IL'INA, G.V.; KUZNETSOVA, N.N.; RYDKIY, S.G.

Effect of physiologically active compounds and ionizing
radiation on the metabolism of wheat. Fiziol. rast. 12 no.3:424-
431 My-Je '65. (MIRA 18:10)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo
universiteta.

L 23435-66 FSS-2/EWT(1)/EEC(k)-2/EWA(d) SCTB TI/DD/GW

ACC NR: AP6012837

SOURCE CODE: UR/0293/66/004/002/0320/0323

AUTHOR: Il'ina, G. V.; Kuznetsova, N. N.; Rydkiy, S. G.; Vysotskiy, V. G. 56
B

ORG: none

TITLE: The effect of spaceflight factors on wheat seeds and plants grown from them 2

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 2, 1966, 320-323

TOPIC TAGS: space biology, radiation effect, germination, wheat, carbohydrate metabolism, protein metabolism, plant physiology

ABSTRACT: A study was made of the growth and development of wheat plants grown from seeds exposed to spaceflight factors on the Vostok-5 and Vostok-6 flights. Experimental and control batches of wheat seeds ("Krasnozerna" variety) were cultivated in fertilized soil under controlled humidity conditions. The energy of germination of seeds was determined and biochemical analysis was made of the plants in the following growth phases: seedling stage, tillering stage, and late flowering stage. A slight tendency to depression of germination was observed in experimental seeds (10% fewer sprouts on the first day of counting). Study of plant growth and accumulation of dry mass showed no difference between experimental and control groups. Biochemical analysis of plants showed insignificant variations in the content of individual sugar fractions, and analogous changes in soluble carbohydrate content in both experimental and control seedlings. The similarity of changes in nitrogen content and in individ- 2

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UDC: 581.057

L 23435-66

ACC NR: AP6012837

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ual fractions of nitrogenous compounds in both groups also shows that spaceflight has no significant effect on biochemical processes in wheat plants. In addition, approximately the same amounts of starch and nitrogenous substances were observed in grains harvested from experimental and control plants. It was concluded that spaceflight factors do not influence the carbohydrate and protein metabolism of plants grown from exposed wheat seeds. It was also concluded that the amount of cosmic radiation included among the complex of Vostok-5 and Vostok-6 flight factors was insignificant for dry wheat seeds (dry wheat seeds are known to be more resistant to irradiation than moistened seeds). Orig. art. has: 4 tables. [JS]

SUB CODE: 06/ SUBM DATE: 13Apr64/ ORIG REF: 003/ ATD PRESS: 4235

Card 2/2 *ds*

ACCESSION NR: AP4015100

S/0205/64/004/001/0150/0156

AUTHOR: Il'ina, G. V.; Kuznetsova, N. N.; Rydkiy, S. G.

TITLE: Effect of wheat seed irradiation on plant metabolism

SOURCE: Radiobiologiya, v. 4, no. 1, 1964, 150-156

TOPIC TAGS: irradiated wheat seed, carbohydrate metabolism change, nitrogen level, 1000 r gamma-irradiation dose, nutritive condition, radiation damage control, soluble carbohydrate, monosaccharose, saccharose, nitrogen nonprotein fraction, phosphorus, potassium, sulfur

ABSTRACT: This study compares carbohydrate metabolism in wheat grown from irradiated and non-irradiated seeds to find a means of eliminating harmful radiation effects in the plant. Experimental and control groups of winter wheat seeds (Moskovska) were soaked in distilled water for 20 hrs and the experimental group was gamma-irradiated (GUBE-800 unit, 500 r/min, focal length 18 cm) with a single 1000 r dose. Experimental and control seeds were grown under different nutritive conditions with varying amounts of phosphorus, potassium,

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and sulfur added to the standard nutritive mixture. Plants were investigated at different growth stages to determine the levels of monosaccharoses, saccharoses, and nitrogen in leaves, stems, and spikes. Carbohydrate metabolism changes in wheat grown from irradiated seeds in a standard nutritive mixture can be expressed as shifts in fraction ratios between various forms of soluble carbohydrates, becoming more marked with growth of plant. The monosaccharose fractions increase and the saccharose fractions decrease. The nonprotein nitrogen fraction increases the total nitrogen level and the protein fraction is decreased. The degree of ratio shift depends on nutritive conditions. Nutritive mixtures with increased levels of phosphorus, potassium, or sulfur intensify plant synthesis and thereby significantly reduce radiation effects. In future investigations, the role of nutritive conditions in carbohydrate metabolism of plants grown from irradiated seeds can be considered as a factor in eliminating damage caused by large radiation doses or as a means of producing maximum beneficial effect with small radiation doses. Orig. art. has: 4 figures.

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ACCESSION NR: AP4015100

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V.
Lomonosova, biologo-pochvennyy fakul'tet (Moscow State University,
Biology-Soil Department)

SUBMITTED: 21Nov62

DATE ACQ: 12Mar64

ENCL: 00

SUB CODE: LS

NR REF SOV: 011

OTHER: 000

Card 3/3

RYDKIL, S. G.

✓ Determining the exchange capacity of soils with the aid of radioactive calcium-45. S. G. Rydkil, F. G. Yanovskaya, and K. B. Orlova (State Univ., Moscow). *Pochvovedenie* 1955, No. 7, 37-43.—The soil is treated with N CaCl₂ to replace the adsorbed cations. The excess CaCl₂ is removed by washing with H₂O, the resulting Ca-satd. soil dried, and a weighed portion treated with CaCl₂ contg. Ca⁴⁵, shaken for 5 min., and the residual Ca⁴⁵ in the soln. detd. By difference, the exchange capacity can be calcd. The most suitable concn. of CaCl₂ contg. Ca⁴⁵ is 0.1-0.05*N*. By applying the Ca⁴⁵ on soils contg. Ca and Mg, the tagged Ca detn. gives the total Ca and Mg. The tagged Ca may also be noted in the case of limestone soils, whereby the Ca of the limestone is not replaced.

AG

②

J. S. Joffe

RYDL, Ladislav (Pardubice)

How mathematics became a deductive science. Pokroky mat fyz astr
9 no.2:87-98 '64

RYDLEWICZ, J.

Types of outdoor transformer stations of medium voltage. Pt. 1. General considerations and planning of stations. p. 209.
(WIADOMOSCI ELEKTROTECHNICZNE. Vol. 16, no. 9, Sept. 1956, Warszawa, Poland)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 12, Dec. 1957 .
Uncl.

RYDLEWICZ, Janusz, mgr inż.

Modern solutions of secondary circuits in medium voltage transformer stations. Wiad elektrotechn 28 no.3:62-64 Mr '61.

1. Energoprojekt, Poznan.

RYDLEWICZ, Janusz, mgr inż.

Newly designed items in electrical engineering at the 33d International
Poznan Fair. Energetyka Pol 18 no. 8:226-229 Ag '64.

1. Energoprojekt, Poznan.

RYDLEWICZ, Janusz, mgr inż.

Technical novelties at the 31st International Poznan Fair.
Energetyka Pol 16 no.9:260-263 S '62.

RYDLEVICZ, Janusz

Prefabrication and mechanization of switchgears in Poland. Elektrotechnika
55 no.10:453-459 0 '62.

1. Energoprojekt, Poznan.

DLUGOSZ, Wiesław, dr inz.; RYDLEWSKI, Janusz, mgr inz.

Concentration parameters and operation scheme. Rudy i metale 8
no.2:54-57 F '63.

RYDLEWICZ, Janusz, mgr inż.; WEISS, Wojciech, mgr inż.

Activities of the Poznan Branch of the Association of the Polish
Electrical Engineers. Przegl techn 84 no.46:5 17 N '63.

RYDLEWICZ, Janusz A., dr inż.

Influence of the chord angle of the blades and the conicity of the wheels on the imparting energy rate in the compressing radial annulus. Ciepl masz przeplyw no.51/52:7-40 '64.

1. Division of Mechanics of Lodz Technical University.

RYDLEWICZ, Janusz, mgr inż.

The new exhibited at the International Poznan Fair.
Energetyka Pol 17 no.9:257-260 S '63.

1. Energoprojekt, Poznan.

RYDLEWICZ, Janusz, mgr inz.

Plastics in the construction of networks. Wiad elektrotechn 30
no.10:325-331 0 '62.

RYDLEWICZ, Janusz A., dr inż.

Characteristics of the rotor wheels of Termodyna radial blowers. Ciężki
masz przepływ no.47/48:47-86 '63.

1. Wydział Mechaniczny, Politechnika, Łódź.

RYDLEWICZ, Janusz, mgr., inz.

Prefabrication in the construction of electric power transformer and distributing stations. Energetyka Pol 16 no.1:6-11 '62.

1. Energoprojekt, Poznan.

RYDLEWICZ, Janusz, mgr., inż.

Principles of street--lighting and examples of obtained solutions.
Przegl elektrotechn 37 no.6:252-254 '61.

1. Energoprojekt, Poznan.

RYDLEWICZ, Janusz, mgr inz.

Plastics in network construction. Wiad elektrotech 30 no.10:
325-331 0 '62.

RYDLEWICZ, Janusz, mgr inż.

The new at the 30th International Poznan Fair. Energetyka Pol.
15 no.9:265-268 S '61.

1. Energoprojekt, Poznan.

RYDLEWICZ, Janusz, mgr. inż.

Modern electric light fitting for street lighting. Przegl
elektrotechn 38 no.7:313-315 J1 '62.

1. Energoprojekt, Poznan.

RYDIEWICZ, Janusz, mgr inz.

Casual lighting of the Poznan streets. Wiad elektrotechn
30 no.9:304-307 S '62.

1. Energoprojekt, Poznan.

Rydlewicz, J.

3895

711.4/5 : 621.316.282

Rydlewicz J. Urban Transformer Substations.

„Miejskie stacje transformatorowe”. Przegląd Elektrotechniczny. No. 9, 1954, pp. 395—400, 13 figs., 1 tab. EE

Work so far carried out in the standardising of types of urban transformer substations. Examples of designs for 0- and 15-kV fields with oil circuit-breakers and disconnecting switches for out-going cables in cities. Transformer rooms and L.T. switchgear — cubicles and wall cabinets. Examples of planning and architecture of substation buildings.

RYDLEVSKIY, D.S.

P.F. Lesgaff; on the fiftieth anniversary of his death. Zdrav.
Belor. 6 no.3:67-68 Mr '60. (MIRA 13:5)
(LESGAFF, PETR FRANTSEVICH, 1837-1909)

RYDLEWICZ, Janusz, mgr inż.

Aiming at simpler solutions in electric power engineering.
Przegl techn 84 no. 36:3 8 S '63.

RYDLEWICZ, Janusz, mgr inż.

The new in electrical engineering at the 29th International Poznan Fair. Energetyka Pol 14 no.8:229-233 Ag '60.

1. Energoprojekt, Poznan.

L 62850-65 EEO-2/EWT(d)/EED-2 Pn-4

ACCESSION NR: AP5019052

UR/0286/65/000/012/0081/0081
531.719.33 : 62-527AUTHOR: Shmerling, I. Ye.; Fishkop, M. Sh.; Ageyev, T. S.; Rydlevskiy, L. L.;
Gershkovich, A. Ye.32
21
BTITLE: An automatic device for surveying jobs, e.g. on a river. Class 42,
No. 172060

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 81

TOPIC TAGS: surveying, radio transmitter

ABSTRACT: This Author's Certificate introduces an automatic device for surveying jobs, e.g. on a river. The installation contains a radio transceiver on the bank, and shipboard equipment including a radio station, a phase sensitive unit and a sonar with a tape deck. The device is designed for doing jobs at night and when visibility conditions are poor. The radio transceiver on the bank has an additional transmitter. A high frequency cable is used to separate the antenna of the extra transmitter from the main transmitter by a reference distance. An indicator for the line of direction (of a reference hyperbola) is connected at the output of the

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L 62850-65

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phase sensitive unit of the equipment aboard the ship.

ASSOCIATION: Tsentral'noye proyektno-konstrukorskoye byuro ministerstva rechnogo flota RSFSR (Central Design and Planning Office, Ministry of the River Fleet, RSFSR)

SUBMITTED: 31Mar64

ENCL: 01

SUB CODE: EC, ES

NO REF SOV: 000

OTHER: 000

Card 2/3

Rydlowski, St.

St. Rydlowski

Rydlowski, St. Vibrations propres d'une poutre à treillis aux nœuds rigides. Arch. Méc. Appl., Gdańsk 1, 99-119 (1949).

The author considers the ²⁶vibration of plane trusses with rigid joints, all motions being in the plane of the truss. The elementary theory of the transverse and longitudinal vibrations of a single bar is applied to a general member of the truss. This yields expressions for the forces and couples acting on the ends of the general member in terms of the displacements and rotations of the ends of the member. The three equations of equilibrium of each joint of the truss, which involve these forces and couples, can then be expressed as a set of equations linear in the displacements and rotations of the joints. The determinant of this set of equations is equated to zero to yield an equation for the determination of the fundamental frequency of the truss. This equation is solved graphically. G. E. Hay.

Source: Mathematical Reviews,

Vol 11 No. 9

jm

RYDLO, Jiri, inz.

Effect of fixed traction equipment on railway transportation
Zel dop tech 10 no.7:197-200 '62.

RYDLEWSKI, St., prof. dr inz.

High-level technical schools in the Baltic coast region.
Przeł techn 85 no. 25: 3,4 21 Je '64.

JANCAREK, Josef, inz.; RYDLINK, Cestmir

Standard of the finishing work in panel houses built by
the Pozemni stavby Karlovy Vary National Enterprise. Poz
stavby 11 no. 6: 336-342 '63.

1. Pozemni stavby Karlovy Vary.

RYDLO, Jiri, inz.

Electric traction vehicles of the Czechoslovak State Railroads.
Zel dop tech 12 no.8:202 '64.

S/194/61/000/012/081/097
D273/D301

AUTHOR: Rydlo, Jiri

TITLE: Exploitation and reconditioning of rectifiers

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika,
no. 12, 1961, 25, abstract 12E141 (Železn. doprava a
techn. 1961. 9, no. 3, 74-77)

TEXT: The use of power rectifiers in the electrification of rail-
ways in Czechoslovakia is considered. At present $\rho\beta$ (RV) is mostly
used. The principle is presented of their action together with an
analysis of the reasons for the rise in reverse ignition; also sta-
tistical data are given on the output in service. Technological
methods are described directed towards warding off reverse igni-
tion (basically an elaborate mechanical adaptation of the surface
of the component). The advantages and disadvantages of tubes work-
ing to the limit (collapsing) and unsoldered (mostly of ignitrons)
are compared. The question of exploitation, the technique of assem-
bly, mounting, switching and limits are considered. It is noticed

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Exploitation and reconditioning ...

S/194/61/000/012/081/097
D273/D301

that recently there has been a greater expansion of semi-conductor
rectifiers. 4 references. / Abstractor's note: Complete transla-
tion. 7

Card 2/2

RYDNIK, V.

The fourth state of matter. Nauka i zhizn' 28 no.9:26-30 S 1961.
(MIRA 14:12)

(Plasma (Ionized gases))

AUTHOR: Rydnik, V. SOV-4-58-8-16/25

TITLE: Supernovae (Sverkhnovyye zvezdy)

PERIODICAL: Znaniye-sila, 1958, Nr 8, pp 17-18 (USSR)

ABSTRACT: The Soviet astrophysician, Professor I.S. Sheklovskiy has expressed the opinion that cosmic radioradiation is caused by charged particles ejected during the flash of supernovae. Soviet scientists I.S. Sheklovskiy and V.I. Krasovskiy admitted the possibility that supernovae could have an influence on our planet. The nature of supernova flashes have not been determined, but the effects have become understandable. Modern astronomy, equipped with powerful means of observation, will soon be able to explain the astonishing phenomenon of supernovae. There are 6 drawings.

1. Supernovae--Theory 2. Radio waves--Sources 3. Radio waves
--Theory

Card 1/1

RYDNIK, V.

Supernovae. Znan. sila 33 no.8:17-18 Ag '58.
(Stars, New)

(MIRA 11:11)

RYDNIK, Vitaliy Isaakovich; POZHIDAYEVA, M.G., red.

[What is quantum mechanics] Chto takoe kvantovaia mekhanika.
Moskva, Sovetskaia Rossiia, 1963. 218 p. (MIRA 17:5)

SAKHAROV, Dmitriy Ivanovich; BLUDOV, Mikhail Ivanovich; RYDNIK, V.I.,
red.; BRUDNO, K.F., tekhn. red.

[Physics for technical schools] Fizika dlia tekhnikumov. Izd.2.,
ispr. Moskva, Fizmatgiz, 1963. 479 p. (MIRA 16:5)
(Physics)

RYDNIK, V. I., and B. M. Yavorskiy. Radiotekhnika i elektronika, v. 8,
no. 4, Apr 1963, 639-645.

12 June

ELEMENTARY PROCESSES NEAR SURFACES IN A GAS DISCHARGE (USSR)

Rydnik, V. I., and B. M. Yavorskiy. Radiotekhnika i elektronika, v. 8,
no. 4, Apr 1963, 639-645. S/109/63/008/004/013/030

A method for the solution of the problem of neutralization of ions and deactivation of metastable atoms near metal or dielectric surfaces is presented. The method, elaborated from ideas of Oliphant and Moon, offers a simpler way, not connected with the perturbation theory, of dealing with the relevant potential and kinetic phenomena. For metals, electron emission caused by ions or metastable atoms is considered as a peculiar "cold emission" process in the electric fields of the ions and atoms lying close to the surface of the metal. In dielectrics the corresponding process is considered as a "local disruptive discharge"; in this instance the results of the Fowler — Nordheim theory became applicable. Such emission is a product of a tunnel effect through the potential barrier or potential well on the surface of a metal or dielectric, respectively. The same approach is also applicable to the deactivation process of metastable atoms. Expressions for the probability of ion neutralization and atom reactivation near the surface are given which are in good agreement with results obtained from the collision theory.

[FVP]

Card 1/1

RYDNIK, V.I.: YAVORSKIY, B.M.

Calculation of nonresonance charge exchange and ionization of atoms
in collisions with slow ions. Izv. AN SSSR. Ser. fiz. 27 no.8:
1005-1008 Ag '63. (MIRA 16:10)

KARASIK, Vladimir Romanovich; BE'OV, K.P., prof., red.; KOZLOV,
V.D., red.; RYDNIK, V.I., red.

[Physics and technology of strong magnetic fields] Fizika
i tekhnika sil'nykh magnitnykh polei. Moskva, Nauka, 1964.
347 p. (MIRA 17:10)

BLOKHIN, Mikhail Arnol'dovich; RYDNIK, V.I., red.; GAVRILOV, S.S.,
tekhn.red.

[Methods of X-ray spectral analysis] Metody rentgeno-
spektral'nykh issledovani. Moskva, Gos.izd-vo fiziko-
metem.lit-ry, 1959. 386 p. (MIRA 12:10)
(X-ray spectroscopy)

NEVZGLYADOV, Vsevolod Gordeyevich; RYDNIK, V.I., red.; YERMAKOVA, Ye.A.,
tekhn.red.

[Theoretical mechanics] Teoreticheskaya mekhanika. Moskva,
Gos.izd-vo fiziko-matem.lit-ry, 1959. 584 p. (MIRA 12:10)
(Mechanics)

RYDNIK, V.

Mystery of the red shift. IUn. tekhn. 4 no.10:43-47 0 '59.
(MIRA 13:1)
(Cosmogony) (Stars--Spectra)

RYDNIK, V.

Birth of atoms. Znan. sila 33 no.2:4-6 F '58.
(Atomic theory) (Chemical elements)

(MIRA 11:4)

RYDNIK, V.

Forces of inertia. Un.tekh. 5 no.1:40-41 Ja '61. (MIRA 14:5)
(Inertia)

RYDNIK, V.

These experiments were set by A.F. Ioffe. Nauka i zhizn' 28
no.8:34-37 Ag '61. (MIRA 14:8)
(Physics--Experiments) (Ioffe, Abram Fedorovich, 1880-1960)

RYDNIK, V.I. [translator]

Fiber optics (from "Scientific American, November, 1960). Nauka
i zhizn' 28 no.4:51-54 Ap '61. (MIRA 14:5)
(Fiber) (Optics)

RYDNIK, V. I.

"On the threshold of the unknown" by V.R.Keler. Reviewed by
V.I.Rydnik. Nauka i zhizn' 27 no.11:74-75 N '60. (MIRA 13:12)
(Physics)
(Keler, V.R.)

RYDNIK, Vitaliy-Issakovich; ROMANOVSKIY, I.V. [Romanova'kyi, I.V.],
[translator]

[In the world of ordinary miracles] U sviti prostykh chudes.
Kyiv, 1961. 32 p. (Tovarystvo dlia poshyrennia politychnykh
i naukovykh znan' Ukrain's'koi RSR. Ser.5, no.23)

(MIRA 14:4)

(Technological innovations)

RYDNIK, V. I.

USSR/Physics - X-Ray Absorption

1 Sep 51

"Concerning Ruled (Measured) Absorption of X-Rays,"
I. B. Borovskiy, V. I. Rydrik, Moscow State U imeni
Lomonosov

"Dok Ak Nauk SSSR" Vol LXXX, No 1, pp 41-44

Attempts a further generalization of the law govern-
ing the ruled (measured) absorption of X-rays for
the purpose of clarifying the peculiarities of the
electron structure of atoms of elements belonging
to the transitional groups, for example, elements
42 Mo and 62 Sm. Submitted 28 Jun 51 by Acad A. A.
Lebedev.

221T83

S.A.

sect. A

X- RAYS

597,531 : 535,343

2732. X-ray absorption lines. I. B. BONDVICKI AND V. L. BOGOMOLOV. Dokl. Akad. Nauk SSSR, 88, 41-4 (No. 1, 1951) in Russian.

Absorption lines are observed in the continuum near the absorption edge for certain transition elements. Their presence can be explained by the special electronic structure of the transition groups of which Mo^{42} and Sm^{62} are taken as examples. There are 2 close absorption maxima corresponding to $\text{Mo}^{42} L_{23}-N_{IV}$ v and $\text{Sm}^{62} M_{IV}-N_{IV}$ vii. The Dirac formula (which has been verified only for 1-electron X-ray spectra) for the fine structure gives only $\frac{1}{2}$ of the separation which is observed. This divergence can be attributed to incorrect values of σ the screening constant. σ_{eff} for Mo is observed to be 10 and σ_{eff} for Sm to be 19 as against 24 and 33 given by the classical theory. The screening constants are recalculated and bring doublet separation and relative intensity into agreement with observations. A. L. MACKAY

ZINOV'YEV, V.A.; SVESHNIKOV, G.N.; SNITKO, I.K.; YAKOVLEV, K.P.,
red.; RYDNIK, V.I., red.; KOLESNIKOVA, A.P., tekhn. red.

[Concise physical and technological handbook]Kratkii fiziko-
tekhnicheskii spravochnik. Moskva, Fizmatgiz. Vol.2.[General
mechanics, strength of materials, theory of mechanisms and
machinery]Obshchaia mekhanika, soprotivlenie materialov, teoriia
mekhanizmov i mashin. 1962. 417 p. (MIRA 15:12)
(Mechanics) (Strength of materials) (Mechanical engineering)

RYDNIK, V.I.; YAVORSKIY, B.M.

Neutralization of slow ions and deactivation of metastable atoms
near metal surfaces. Dokl. AN SSSR 144 no.5:1026-1029 Je
'62. (MIRA 15:6)

1. Predstavleno akademikom L.A.Artsimovichev.
(Ions) (Electrons) (Atoms)

TYURIN, Nikolay Ivanovich; RYDNIK, V.I., red.; BRUDNO, K.F., tekhn.red.

[In search for precision] V poiskakh tochnosti. Izd.2., perer.
i dop. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1960. 246 p.
(MIRA 13:9)

(Mensuration)

(Weight and measures)

ZINOV'YEV, V.A.; SVESHNIKOV, G.N.; SNITKO, I.K.; YAKOVLEV, K.P., red.;
RYDNIK, V.I., red.; AKHLAMOV, S.N., tekhn.red.

[Short handbook on physics and mechanics] Kratkii fiziko-
tekhnicheskii spravochnik. Moskva, Gos.izd-vo fiziko-matem.
lit-ry. Vol.2. [General mechanics, strength of materials,
theory of mechanisms and machines] Obshchaya mekhanika, sopro-
tivlenie materialov, teoriya mekhanizmov i mashin. 1960. 411 p.
(MIRA 13:12)

(Mechanics)

(Strength of materials)

(Machinery)

RYDNIK, V.I.

AUTHOR: Rydnik, V.I.

25-8-35/42

TITLE: The Sea Signals (More signaliziruyet)

PERIODICAL: Nauka i Zhizn', 1957, # 8, p 56 (USSR)

ABSTRACT: The Ocean waters are conductors of electricity moving in the magnetic field of the Earth and have the same effect as the rotation of a rotor in the magnetic field of the generator's stator. The magnetic field of the Earth, however, is very small and a million tons of water is required to generate only one volt/sec. Modern equipment of today can register this electrical phenomenon of the sea. Hurricanes shift very large masses of water, thereby generating electricity. Research work done on the coast of Florida has proved that hurricanes can be registered in this way, while their center is still many hundred km away.

AVAILABLE: Library of Congress

Card 1/1

RYDNIK, V.

Vision and color. IUn.tekh. 4 no.12:41-45 D '59.
(MIRA 13:4)
(Colorsense)

SAKHAROV, Dmitriy Ivanovich; BLUDOV, Mikhail Ivanovich; RYDNIK, V.I.,
red.; GAVRILOV, S.S., tekhn.red.

[Physics for technical schools] Fizika dlia tekhnikumov.
Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1960. 479 p.

(MIRA 13:5)

(Physics)

Rydnik, V.

AUTHOR: Rydnik, V.

4-2-2/18

TITLE: Birth of the Atoms (Rozhdeniye atomov)

PERIODICAL: Znaniye-Sila, 1958, # 2, pp 4-6 (USSR)

ABSTRACT: There is reason to believe the elements have not always existed. The curve of atomic weights is very erratic. The ferrous group is 10,000 times more frequent in nature than the curve would suggest. Hydrogen is very stable, and therefore very frequent; but the stablest of all is Helium, with its protons and two neutrons.

George Gamow's theory, Hoyle's theory and the theory of the "expanding universe" are referred to in an attempt to account for this erraticness. The author concludes, that the missing atomic weights 5 and 8 represent very unstable elements lasting only a second or two, or elements that are not now on Earth but still exist elsewhere in the universe.

There are 7 sketches.

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Card 1/1

Rydrik, V.I.

25-58-4-30/41

AUTHOR: Rydrik, V.I.,

TITLE: The Telescope Sees Farther and Farther (Teleskop vidit vse dal'she i dal'she)

PERIODICAL: Nauka i Zhizn', 1958, Nr 4, p 71 (USSR)

ABSTRACT: A new method has been introduced to intensify stellar light which enters the telescope. This consists of the use of photo-multipliers and eliminators of night-sky glow by conversion of light into electric charges, permitting a 50,000-fold magnification. This intensification makes the construction of extra-large sized telescopes unnecessary.

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Card 1/1 1. Telescopes-Development

MALYAROV, Vladimir Vladimirovich; HYDNIK, V.I., red.; GAVRILOV, S.S.,
tekhn.red.

[Principles of the theory of the atomic nucleus] Osnovy
teorii atomnogo iadra. Moskva, Gos.izd-vo fiziko-matem.
lit-ry, 1959. 471 p. (MIRA 12:6)
(Nuclei, Atomic)

RYDNIK. V.I.

Ionography. Nauka i zhizn' 25 no.1:65 Ja '58.
(Radiography)

(MIRA 11:3)

RYDNIK, V.I.

The telescope can see farther and farther. Nauka i zhizn' 25
no.4:71 Ap '58. (MIRA 11:5)
(Telescope)

RYDNIK V.I.

RYDNIK, V.I.

Ever increasing precision. Nauka i zhizn' 24 no.10:51 0 '57.
(Light--Speed) (MLRA 10:11)

RYDNIK, V.I.
SKACHKOV, Sergey Vladimirovich; KONSTANTINOV, Leonard Vasil'yevich;
STROGANOVA, Rimma Petrovna, YUROVA, Lidiya Nikolayevna, TOPORKOVA,
Eleonora Petrovna; RYDNIK, V.I., red.; MURASHOVA, N.Ya., tekhn.red.

[Collection of problems in nuclear physics] Sbornik zadach po
iadernoii fizike. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry,
1958. 164 p. (MIRA 11:3)
(Nuclear physics--Problems, exercises, etc.)

R 7 P M K I V I
ZHDA NOV, Leonid Sergeyevich; KHLEBNIKOV, Nikolay Ivanovich; SUVOROV, N.P.,
red.; RYDNIK, V.I., red.; AKHLAMOV, S.N., tekhn.red..

[A course in physics for engineering schools] Kurs fiziki dlia
tekhnikumov. Moskva, Gos.izd-vo tekhniko-teoret. lit-ry, 1957.
Pt.2. [Electricity, optics, physics of the atom and the atomic
nucleus] Elektrichestvo, optika, fizika atoma i atomnogo iadra.
Pod red. N.P.Suvorova. 488 p. (MIRA 11:2)
(Physics)

Rydnik, V.I.

AUTHOR: Rydnik, V.I.

25-1-21/48

TITLE: Ionography (Ionografiya)

PERIODICAL: Nauka i Zhizn', 1958, # 1, p 65 (USSR)

ABSTRACT: The new method applied for X-raying manufactured articles - called ionograph - is less expensive and less complicated than the old method - xerography. It consists of making use of the ionization of air by passing X-rays through the air, thereby removing electrons from the atoms of gases, and thus forming positive ions. A solid object to be examined, placed before the outlet of the X-rays, will naturally absorb some of them. A plate, made up of any isolator (e.g. ebonite or bakelite), the surface of which is electrically charged, will attract the ions formed by the X-rays. Finally, a thin wire-netting with high tension will be placed not far from the surface mentioned above. Under these circumstances, the ions will be attracted to the surface in the shortest way possible - in straight lines. Thus the quantity of ions hitting some part of the isolator's surface will exactly correspond to the quantity of ions formed by the X-rays directly opposite the given part. The greater the amount of ions hitting this part, the quicker it is dis-

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Ionography

25-1-21/48

charged, for the ions on the surface of the isolator are combined with the electrons. Thus a non-visible electric image is produced. The process of development is carried out by plunging the isolator plate into a suspension of colored powder, for instance, coal soot. In contrast to photographic material, as many images as necessary can be obtained from the charged surface of the isolator. The "obliteration" of the preceding image is done by dipping the plate into alcohol.

There is one illustration.

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Card 2/2

AUTHOR:

Rydnik, V.I.
Rydnik, V. I.

25-10-25/41

TITLE:

More and more exact (Vse tochneye i tochneye)

PERIODICAL:

Nauka i Zhizn', 1957, # 10, p 51 (USSR)

ABSTRACT:

Up to now all experiments to measure the speed of light did not achieve satisfying results. Recently the Soviet physicist K. S. Vul'fson suggested a scheme for exact measurement of the speed of light through the use of a special lamp which produces very short flashes of light with a duration of a 100 millionth part of a second. The light of each flash strikes a mirror, is reflected and falls on to a photo element which then switches on a supply circuit of the lamp which in turn causes the following flash. When measuring the number of flashes of the lamp during a specified time and knowing the distance between the lamp and the mirror and also the length of the lamp's supply circuit (this small value has to be considered as well), the speed of light can be determined almost exactly.

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RYDNIK, V.I.

Liquid helium helps in counting. Nauka i zhizn' 24 no.7:53 J1 '57.
(Calculating machines) (Helium) (MLBA 10:8)

Rydnik, V. I.
AUTHOR: Rydnik, V.I.

25-7-36/51

TITLE: Liquid Helium as an Aid in Counting (Zhidkiy geliy pomogayet schitat')

PERIODICAL: Nauka i Zhizn', 1957, # 7, p 53 (USSR)

ABSTRACT: The article deals with a new counting device named Cryotron developed by a group of physicists at the Massachusetts Institute of Technology. It is based on superconductivity, a phenomenon peculiar to some metals which conduct electric current better when heated to temperatures of from -260 to -270° C. For example, a tantalum rod becomes superconductive at the temperature of liquid Helium but the superconductivity is destroyed when a magnetic field is formed by a surrounding coil of metal that has no superconductive properties at low temperatures. This phenomenon is used for counting current impulses. Each impulse will cause a reduction of the current in the circuit of which the tantalum is a part. At the end of each impulse, the superconductivity of the tantalum will return. This is the principle on which the Cryotron is built.

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Rydnyk, V.I.
BOSVORT, R. Ch. L. [Bosworth, R.C.L.],; DOTSENKO, B.B., [translator],;
SURINOV, Yu.A., red.; RYDNIK, V.I., red.; NEGRIMOVSKAYA, R.A., tekhn. red.

[Heat transfer phenomena] Protsesty teplovogo perenosa. Moskva,
Gos. izd-vo tekhniko-teoret. lit-ry, 1957. 275 p. [Translated from
the English]. (MIRA 11:12)

(Heat--Transmission)

ZISMAN, Girsh Abramovich; TODES, Oskar Movshevich; RYINIK, V.I., red.;
GAVRILOV, S.S., tekhn.red.

[Course in general physics] Kurs obshchei fiziki. Vol.1
[Mechanics, molecular physics, vibrations, and waves] Mekhanika,
molekuliarnaia fizika, kolebaniia i volny. Moskva, Gos.izd-vo
fiziko-matem.lit-ry. 1958. 320 p. (MIRA 12:2)
(Physics)

SOKOLOV, Arseniy Aleksandrovich; RYDNIK, V.I., red.; AKHLAMOV, S.N., tekhn.red.

[Introduction to quantum electrodynamics] Vvedenie v kvantovuyu
elektrodinamiku. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1958.
534 p. (MIRA 12:3)

1. Moskovskiy gosudarstvennyy universitet (for Sokolov).
(Electrodynamics) (Quantum theory)

RYDNIK, V.I.

BOGOLYUBOV, Nikolay Nikolayevich; SHIRKOV, Dmitriy Vasil'yevich; ~~RYDNIK, V.I.~~, redaktor; NEGRIMOVSKAYA, R.A., tekhnicheskiiy redaktor

[Introduction to the quantum theory of fields] Vvedenie v teoriyu kvantovannykh polei. Moskva, Gos.izd-vo tekhniko-teoret. lit-ry, 1957. 442 p. (MLRA 10:9)

(Quantum theory) (Field theory)

RYDNIK, V. I.

LANDAU, Lev Davydovich; LIFSHITS, Yevgeniy Mikhaylovich; RYDNIK, V.I.,
redaktor; MURASHOVA, N.Ya., tekhnicheskiy redaktor

[Electrodynamics of continuous media] Elektrodinamika sploshnykh
sred. Moskva, Gos.izd-vo tekhniko-teoret. lit-ry, 1957. 532 p.
(Electromagnetic theory) (MLPA 10:10)

RYDNIK, V.I.

The calculating ray. Nauka i zhizn' 23 no.8:53 Ag '56.(MIRA 9:9)
(Microscopy)

NASILOV, Dmitriy Nikolayevich; KHRGIAN, A.Kh, professor, redaktor; SEMENOV, A.A., redaktor; RYDNIK, V.I., redaktor; TUMARKINA, N.A., tekhnicheskii redaktor

[Radiometeorology; radio methods in meteorology] Radiometeorologiya; radiometody v meteorologii. Pod red. A.Kh.Khrgiana. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 215 p. (MIRA 9:12)
(Meteorology) (Atmospheric electricity)

BYKHENVAL'D, Aleksandr Aleksandrovich; MLODZEEVSKIY, A.B., professor,
redaktor; GRIGOROVA, V.A., redaktor; RYDNIK, V.I., redaktor;
MURASHOVA, N.Ya., tekhnicheskiiy redaktor

[Selected works] Izbrannyye raboty. Pod red. i s primechaniiami A.B.
Mlodzeevskogo. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956
266 p. (MIRA 9:12)

(Electricity)

GREW, K.E.; IBBS, T.L.; MAKSIMOVSKAYA, I.S. [translator] LYKOV, A.V.,
professor, redaktor; RYDNIK, V.I., redaktor; GAVRILOV, S.S.,
tekhnicheskiiy redaktor

[Thermal diffusion in gases. Translated from the English]
Termicheskaya diffuziya v gazakh. Perevod s angliiskogo I.S.
Maksimovskoi. Pod red. A.V.Lykova. Moskva, Gos. izd-vo tekhniko-
teoret. lit-ry, 1956. 183 p. (MLRA 10:1)
(Diffusion)

BOROVSKIY, I. B.; RYDNIK, V. I.

• X-Ray adsorption Line

Dok AN SSSR, Vol 80, No 1, 1 Sep 51, p. 41

Rybnik, V.I.
ZHDANOV, Leonid Sergeyevich; KHLEBNIKOV, Nikolay Ivanovich; SUVOROV, N.P.
redaktor; RYDNIK, V.I., redaktor; TUMARKINA, N.A., tekhnicheskiy
redaktor

[A course in physics for technical schools] Kurs fiziki dlia
tekhnikumov. Pod red. N.P. Suvorova. Moskva, Gos. izd-vo
tekhniko-teoret. lit-ry. Pt.1. [Mechanics and molecular physics]
Mekhanika i molekuliarnaia fizika. 1956. 391 p. (MLRA 10:5)
(Mechanics) (Molecular dynamics)

RYDNIK, Vitaliy Isaakovich; ZYUZANKOV, I.P., red.; SAVCHENKO, Ye.V.,
tekh.n.red.

[In the world of ordinary marvels] V mire prostykh chudes.
Moskva, Izd-vo "Znanie," 1960. 30 p. (Vsesoiuznoe obshchestvo
po rasprostraneniю politicheskikh i nauchnykh znaniy. Ser.10,
Molodezhnaya, no.8). (MIRA 13:8)
(Inventions)

RYDNIK, V.L.; KRASOVSKIY, V.K.; TRIPOL'SKIY, A.A.

Necessity for organizing heavy soda production. Khim. prom. 41 no.3:
200-201 Mr '65. (MIRA 18:7)

1. Nauchno-issledovatel'skiy institut osnovnoy khimii, Khar'kov.

STEFANOVSKIY, Yevgeniy Yevgen'yevich; BORODKIN, V.I., kand. tekhn. nauk, dots., retsenzent; VED', Ye.I., kand. tekhn. nauk, dots., retsenzent; RYDNIK, V.L., kand. ekon. nauk, otv. red.; FISHCHENKO, B.V., red.; TROFIMENKO, A.S., tekhn. red.

[Economics of the silicate industry of the U.S.S.R.] Ekonomika silikatnoi promyshlennosti SSSR. Khar'kov, Izd-vo Khar'kovskogo univ., 1962. 204 p. (MIRA 16:12)

(Silicates)

5(1)

AUTHOR:

Rydnik, V. L.

SOV/64-59-4-23/27

TITLE:

Some Questions on the Development of the Soda Industry in Capitalistic Countries (Nekotoryye voprosy razvitiya sodovoy promyshlennosti v kapitalisticheskikh stranakh)

PERIODICAL:

Khimicheskaya promyshlennost', 1959, Nr 4, pp 81-87 (USSR)

ABSTRACT:

A detailed survey concerning the soda production of Western countries, mainly within the years 1940-1958, is given. In the paragraph dealing with production statistics, among other things data concerning the changes in the production capacity of calcinated- (Table 1) and caustic soda (Table 2) are given. In another paragraph about the assortment and the consumption of soda products, the consumption of soda, potassium chloride, methyl-chloride and magnesium chloride is described. As concerns the technique applied in soda production, it is stated that the ammonia method is preferably used. The production technique in different Western countries is described, and individual works and the devices they use are mentioned. In the last paragraph some scientific research works concerning the technology of soda production are explained. There are 2 tables and 42 references.

Card 1/1

ZELIKIN, M.B.; MITKEVICH, E.M.; NENNO, E.S.; OVECHKIN, Ye.K.; PANOV, V.I.;
RYDNIK, V.L.; TABUNSHCHIKOV, N.P.; RATMANSKIY, N.S., red.; ZAZUL'-
SKAYA, V.F., tekhn.red.

[Production of soda ash] Proizvodstvo kal'tsinirovannoi sody.
Pod red. M.B.Zelikina. Moskva, Gos.nauchno-tekhn.izd-vo khim.
lit-ry, 1959. 421 p. (MIRA 13:5)
(Sodium carbonate)

KONDRAT'YEV, Viktor Nikolayevich; RYDNIK, V.I., red.; GAVRILOV, S.S.,
tekhn.red.

[Structure of atoms and molecules] Struktura atomov i molekul.
Izd.2., perer. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1959.
524 p. (MIRA 13:5)

(Atoms) (Molecules)

RYDNIK, V.I.

Problems involved in the methods of determining the economic effectiveness of automation of chemical industries. Khim. prom. 40 no.11:852-856 N '64 (MIRA 18:2)

1. Nauchno-issledovatel'skiy institut orovnoy khimii.

RYDNIK, V.L.

Conference on the utilization and diminution of soda manufacture
wastes. Khim. prom. no.8:498-499 D '57. (MIRA 11:2)
(Soda industry--By-products--Congresses)

Rydnik, V. L.

AUTHOR: Rydnik, V. L.

64-8-14/19

TITLE: Conference on the Question of the Exploitation of Wastes of Soda Production and the Reduction of Their Quantity (Soveshchaniye po voprosu ispol'zovaniya otkhodov sodovogo proizvodstva i umen'sheniya ikh kolichestva).

PERIODICAL: Khimicheskaya Promyshlennost', 1957, Nr 8, pp. 50-51 (USSR)

ABSTRACT: The conference took place in Khar'kov in September 1957. The conference was called by the Allunion Association for Chemistry imeni D. I. Mendeleev and the scientific research institute for basic chemistry (NIOkhim). The lectures and reports dealt with the results of the works carried out in the years 1954 up to 1957. These works concerned the protection of the North-Donets river and of the underground waters around the Don against contaminations by the waste waters of the chemical factories in the Donbass. Certain successes were obtained in the working out of processes for the exploitation of the chloride refuse of the soda production and of the production of a series of goods (calcium chloride, barium chloride, and others more) from the latter. Plans were worked out for the deduction of the waste waters from the chemical works directly into the Sea of Azof, without

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Conference on the Question of the Exploitation of Wastes of
Soda Production and the Reduction of Their Quantity

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touching the North-Donets. Following shortcomings were detected: still great quantities of chloride solutions are discharged into the water reservoirs which causes great damage to agriculture, fish-, water-, and energy economy. On the other hand, however, there is a great shortage of calcium chloride as good, of that substance that forms the main component of the waste of the soda production. It was found that the present production of calcium chloride is completely insufficient. V. F. Turchin from the NIUIF (scientific research institute for fertilizers, insecticides and fungicides) gave in his report the results of the many years' investigations of the application of the ammonium chloride as fertilizer. The possibility of using the latter as fertilizer before the seed in the regions of the neutral and alkaline soils (Ukraine, North-Caucasus, West-Siberia, etc.) was detected. It would be expedient to increase up to 1960 the production of ammonium chloride up to 270,000 tons (80,000 tons nitrogen). A new variant of the soda production was worked out. It is based upon the application of dolomite

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Conference on the Question of the Exploitation of Wastes of
Soda Production and the Reduction of Their Quantity

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instead of limestone or chalk. It was found that for the
stopping of the salting of the North-Donets with chloride
refuse it is necessary to build a main pipe-line from the
Donbass to the Sea of Azof.

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Card 3/3

RYDNIK, V L., kand. ekonom. nauk; CHERNEGA, L.G.

Technological and economic comparison of silica white production
methods. [Trudy] NIOKHIM 15:110-119 '63.

(MIRA 18:2)